

## **ABSTRACT**

The liquid effluent from solvent extraction contains radioactive thorium Th-231 and Th-234. This invention uses an ion exchange process to remove and concentrate the thorium. The process is designed so that the thorium remains on the ion exchange column until it decays to uranium and protactinium. These decay products are subsequently replaced by additional thorium. Therefore, the thorium never reaches break-through and the column can be used continuously without regeneration.